

AMENDMENTS TO THE CLAIMS

Please amend claims 1, 7 and 8, and cancel claim 2, as set forth in the listing of claims that follows:

1. (Cancelled) A method for removing contamination from commutators and brushes of a DC motor operationally connected to an intake air control valve of an internal combustion engine and having a predetermined range of motion between a first limit and a second limit, said internal combustion engine having an ignition on state and an ignition off state, said method comprising the steps of:

a) actuating said motor in a first rotational direction to drive said intake control valve apparatus to said first limit a first extreme in said range; and

b) actuating said motor in a second and opposite rotational direction to drive said intake control valve apparatus to said a second limit and opposite extreme in said range,

wherein said actuating steps are carried out when said internal combustion engine is in said ignition off state.

2. (Cancelled)

3. (Original) A method in accordance with Claim 1 wherein motion is rotational and wherein said range is about 90°.

4. (Original) A method in accordance with Claim 2 wherein said engine is mounted in a vehicle having an engine ignition system, comprising the further step of determining that said ignition system is in a shut-off state.

5. (Original) A method in accordance with Claim 4 wherein motion of said motor actuator and said intake air control valve is controlled by a programmable electronic controller, and wherein said controller is programmed with an algorithm for controlling said steps.

6. (Original) A method in accordance with Claim 5 wherein said algorithm for controlling said steps is carried out in no more than 33 milliseconds.

7. (Currently Amended) In an intake air control system for an internal combustion engine having an ignition on state and an ignition off state, the system including an intake air valve having a predetermined range of motion between a first limit and a second limit and being actuated by a DC motor having at least one commutator and at least one brush, and a programmable controller for controlling motion of the DC motor, the improvement comprising:

programming said controller to firstly actuate said motor in a first rotational direction to drive said intake air valve to said first limit a first extreme in said range, and then to secondly actuate said motor in a second and opposite rotational direction to drive said intake air valve to said second limit a second and opposite extreme in said range,

said first and second actuations occurring when said internal combustion engine is in said ignition off state being intended to cause contaminants in said DC motor to be dislodged therefrom.

8. (Currently Amended) An internal combustion engine having an ignition on state and an ignition off state and, comprising, an intake air control system including an intake air valve having a predetermined range of motion between a first limit and a second limit and being actuated by a DC motor having at least one commutator and at least one brush, and a programmable controller for controlling motion of the DC motor, said controller being programmed to firstly actuate said motor in a first rotational direction to drive said intake air valve to said first limit a first extreme in said range, and then to secondly actuate said motor in a second and opposite rotational direction to drive said intake air valve to said second limit a second and opposite extreme in said range, said first and second actuations occurring when said internal combustion engine is ignition off state being intended to cause contaminants in said DC motor to be dislodged therefrom.